

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application as follows:

1. (Cancel) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:
 - a light source constructed and arranged to emit at least one beam of light; and
 - a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target.
2. (Cancel) The device of claim 1, said lens assembly comprising a collimating lens positioned with respect to the at least one beam of light and a focusing lens spaced from the collimating lens.
3. (Cancel) The device of claim 2, said collimating lens and said focusing lens each comprising a fresnel lens.
4. (Cancel) The device of claim 2, said collimating lens comprising a micro lens.
5. (Cancel) The device of claim 4, said micro lens comprising a cylindrical micro lens.
6. (Cancel) The device of claim 4, said micro lens being mounted to said light source.

7. (Cancel) The device of claim 1, including a motor controller and actuator for moving said wedge and actuating said light beam at the precise moment to achieve poration of predetermined target locations.
8. (Cancel) The device of claim 7, said at least one laser diode further comprising a semiconductor laser diode chip.
9. (Cancel) The device of claim 7, said lens assembly having a micro lens affixed to said at least one laser diode and through which said at least one beam of light passes.
10. (Cancel) The device of claim 9, said micro lens comprising a cylindrical micro lens.
11. (Cancel) The device of claim 7, comprising a casing within which said at least one laser diode is positioned, said lens assembly comprising a focusing lens affixed to said casing and spaced from said at least one laser diode.
12. (Cancel) The device of claim 11, said lens assembly further comprising a collimating lens affixed to said at least one laser diode, said focusing lens being spaced from said collimating lens.
13. (Cancel) The device of claim 1, comprising a beam steering device constructed and arranged to direct said at least one beam of light to said at least two spaced locations on the surface plane.
14. (Cancel) The device of claim 13, said beam steering device comprising a beam steering optical element and a drive means for moving said optical element so that said at least one beam of light is directed from a first location on the surface plane to a second spaced location thereon.

15. (Cancel) The device of claim 14, said drive means comprising a stepper motor, said wedge is an optical element being selected from one of the group of optical elements consisting of a wedge prism and a tilted or angled plane.
16. (Cancel) The device of claim 15, further comprising a motor controller coupled to said stepper motor for control the movement of said beam steering device.
17. (Cancel) The device of claim 13, further comprising a controller coupled to said beam steering device, said controller being constructed and arranged to control the movement of said beam steering device to sequentially direct said at least one beam of light to said at least two spaced locations on the surface plane.
18. (Cancel) The device of claim 13, said beam steering device comprising a beam steering optical element, said wedge being selected from one of the group of optical elements consisting of a wedge prism, a tilted or angled plane, and a holographic plate.
19. (Cancel) The device of claim 1, said device being constructed and arranged to sequentially direct the beam of light to at least four spaced locations on the surface plane in a predetermined pattern.
20. (Cancel) The device of claim 19, said at least four spaced locations on the surface plane defining a predetermined pattern thereon.
21. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:
 a light source constructed and arranged to emit at least one beam of light; and
 a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;
 said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam

to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target, said device being constructed and arranged to sequentially direct the beam of light to at least four spaced locations on the surface plane in a predetermined pattern and wherein ~~The device of claim 19~~, each of the at least four spaced locations on the surface plane being spaced approximately eight hundred microns from each adjacent one of said at least four spaced locations thereon.

22. (Cancel) The device of claim 1, said light source and said lens assembly being fitted within a housing sized and shaped to fit in the hand of a device user.

23. (Cancel) The device of claim 22, further comprising a power supply within said housing for powering said light source.

24. (Cancel) The device of claim 22, further comprising a beam steering device positioned within said housing with respect to said light source, said beam steering device being constructed and arranged to direct said at least one beam of light to said at least two spaced locations on the surface plane.

25. (Cancel) The device of claim 24, further comprising a controller within said housing, said controller being operably coupled to said power supply, said light source, and said beam steering device, for triggering the emission of said at least one beam of light from said light source and for directing said at least one beam of light to said at least two spaced locations on the surface plane when said wedge is positioned to direct said beam to said locations.

26. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:
a light source constructed and arranged to emit at least one beam of light; and
a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target.; said light source and said lens assembly being fitted within a housing sized and shaped to fit in the hand of a device user and wherein ~~The device of claim 22,~~ said light source comprising at least two laser diodes mounted to a mounting block positioned within said housing and wherein said mounting block includes at least two generally planar walls generally orthogonal to the target locations, and that the spacing between said walls generally fixed the relative spacing between targets of the diodes.

27. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light; and
a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target; said light source and said lens assembly being fitted within a housing sized and shaped to fit in the hand of a device user and said light source comprising at least two laser diodes mounted to a mounting block positioned within said housing and wherein said mounting block includes at least two generally planar walls generally orthogonal to the target locations, and that the spacing between said walls generally fixed the relative spacing between targets of the diodes and ~~The device of claim 26,~~ further comprising a controller coupled to each of said at least two laser diodes and adapted to sequentially operate each said laser diode with respect to the other for directing the beam of light to said at least two spaced locations on the surface plane.

28. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light; and
a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target ; ~~The device of claim 4,~~ said light source comprising at least two laser diodes mounted on a mounting block and wherein said mounting block includes at least two generally planar walls generally orthogonal to the target locations, and that the spacing between said walls generally fixed the relative spacing between the targets of the diodes.

29. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light; and
a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target ; said light source comprising at least two laser diodes mounted on a mounting block and wherein said mounting block includes at least two generally planar walls generally orthogonal to the target locations, and that the spacing between said walls generally fixed the relative spacing between the targets of the diodes; ~~The device of claim 28,~~ said light source comprising four spaced laser diodes mounted on a

common mounting block and wherein said mounting block includes 4 generally planar walls for defining the relative spacing between said the targets of the diodes.

30. (Currently Amended) A light beam generation and focusing device for directing at least one focused beam of light at a target surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light; and

a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane including at least one rotating wedge interposed in the path of said light beam capable of redirecting the beam to multiple locations and actuate said light beam when said wedge is in position to direct the beam to said target; said light source comprising at least two laser diodes mounted on a mounting block and wherein said mounting block includes at least two generally planar walls generally orthogonal to the target locations, and that the spacing between said walls generally fixed the relative spacing between the targets of the diodes and wherein each of said at least two laser diodes comprising a single active element laser diode chip; ~~The device of claim 28~~ and wherein said light source comprising four spaced laser diodes mounted on a common mounting block and wherein said mounting block includes 4 generally planar walls for defining the relative spacing between said the targets of the diodes.

31. (Original) The device of claim 30, each said laser diode chip being spaced approximately eight hundred microns from each adjacent one of said laser diode chips.

32. (Original) The device of claim 30, said laser diode chips being spaced apart from one another to form a predetermined pattern of beams of light directed to the surface plane.

33. (Original) The device of claim 28, comprising a microcontroller coupled to each said laser diode and adapted to sequentially operate each said laser diode with respect to one another for emitting said at least one beam of light and for sequentially directing said at least one beam of light to said at least two spaced locations on the surface plane.

34. (Previously Presented) The device of claim 28, said mounting block comprising a heat sink mounting block having a first planar surface, a spaced parallel second planar surface, and a plurality of sides adjoining one another and each said planar surface along their respective common edges.

35. (Original) The device of claim 34, each of said at least two laser diodes being mounted to a separate one of the sides of said mounting block.

36. (Original) The device of claim 34, comprising a separate insulated wire bonding pad on said mounting block for each respective one of said at least two laser diodes.

37. (Cancel) The device of claim 1, comprising a controller constructed and arranged to sequentially direct said at least one beam of light to said at least two spaced locations on the surface plane.

38. (Cancel) A method of reliably generating focused light beams directed to a surface plane at a predetermined distance from each other, comprising:

- a) fixing the location on multiple light beam sources on a rigid heat sinking material;
- b) emitting at multiple light beams;
- c) passing the beams of light through a lens assembly and focusing said at least one beam of light on the surface plane in response thereto; and
- d) sequentially directing each beam of light to a plurality of spaced locations on the surface plane.

39. (Cancel) The method of claim 38, comprising the step of directing the at least one beam of light to a first location on the surface plane and then to a spaced second location thereon using a beam steering device.

40. (Cancel) The method of claim 38, comprising the step of emitting at least two separate beams of light toward the surface plane using at least two spaced laser diodes.

41. (Cancel) The method of claim 38, comprising the step of sequentially directing the at least one beam of light to at least four spaced locations on the surface plane in a predetermined pattern.

42. (Currently Amended) A method of reliably generating focused light beams directed to a surface plane at a predetermined distance from each other, comprising:

a) fixing the location on multiple light beam sources on a rigid heat sinking material;

b) emitting at multiple light beams;

c) passing the beams of light through a lens assembly and focusing said at least one beam of light on the surface plane in response thereto; and

d) sequentially directing each beam of light to a plurality of spaced locations on the surface plane.

e) sequentially directing the at least one beam of light to at least four spaced locations on the surface plane in a predetermined pattern

~~f) The method of claim 41, comprising the step of directing a beam of light to each of said at least two spaced locations on the surface plane so that each said location is spaced approximately eight hundred microns from each adjacent one of said spaced locations.~~

43. (Previously Presented) A light beam generation and focusing device for directing at least one focused beam of light at a surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light, said light source comprising at least two laser diodes mounted on a mounting block, said mounting block comprising a copper mounting block having a first planar surface, a spaced parallel second planar surface, and a plurality of sides adjoining one another and each said planar surface along their respective common edges,

said mounting block including a separate insulated wire bonding pad on said mounting block for each respective one of said at least two laser diodes; and

a lens assembly constructed and arranged to focus said at least one beam of light on the surface plane;

said device being constructed and arranged to sequentially direct the at least one beam of light to at least two spaced locations on the surface plane.

44. (Previously Presented) A light beam generation and focusing device capable of directing at least two separate unsplit focused beams of light at a surface plane, said device comprising:

a light source constructed and arranged to emit at least one beam of light, said light source comprising at least two laser diodes mounted on a mounting block, said mounting block including a heat sink for cooling said diodes and for creating a fixed spacing therebetween comprising first and second spaced apart planar surfaces upon which said diodes are immovably attached,

a lens assembly constructed and arranged to focus said at the beam of light from each diode on the surface plane; and

said device being constructed and arranged to direct beams of light to at least two apart spaced locations on the surface plane.

45. (Previously Presented) A light beam generation and focusing device according to claim 44 wherein said mounting block has planar opposing walls and recesses for receiving at least a portion of each diode to actually align their position.

46 (Previously Presented) A light beam generator and focusing device according to claim 45 further including an insulating portion on said planar surfaces between said heat sink and said diodes.